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10/822,048	04/08/2004	Robert L. Faulk JR.	200313930-1	2246
22879 7590 02/04/2009 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER HALIYUR, VENKATESH N				
ART UNIT 2419		PAPER NUMBER		
NOTIFICATION DATE 02/04/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/822,048

Applicant(s)

FAULK, ROBERT L.

Examiner

VENKATESH HALIYUR

Art Unit

2419

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/09/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-25 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/08/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 01/09/2009 has been considered for claims 1-25 and is effective to overcome Droms in view of Donaldson references for claims 1-17. However a new ground(s) of rejection has been made in view of Droms and a newly found Green et al reference and therefore the rejection communicated via previous office action has been withdrawn. Rejection follows.
2. Claims 1- 25 is pending in the application.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 1-8 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See *In re Bilski*, 88 USPQ2d

1385, 1391 (Fed. Cir. 2008). The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process.

The method including steps as recited in claims 1-8 is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. Therefore appropriate corrections are required to claims 1-8.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5 Claims 1-3, 5-11, 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Droms et al [US Pat: 7,143,435] in view of Green et al [US Pub: 2004/0193918].

Regarding claim 1, Droms et al in the invention of "Method and Apparatus for Registering Auto-Configured Network Addresses Based on Connection Authentication" disclosed a method of developing an access control list, comprising: developing an enhanced access control list (**item 146 of Fig 1**) including data related to at least one of

user names (**user groups**), DNS names (**URL**), Windows domain names (**domain names**), and physical addresses (**col 8, lines 30-62**); Droms disclosed maintaining hosts/clients IP addresses corresponding to the domain names in ACL translated by the domain name server (**col 9, lines 1-27, col 12, lines 50-67, col 13, lines 1-24**) and a map of IP address to physical address (MAC) for physical connection in DHCP server (**col 10, lines 16-32, col 12, lines 21-32**) and Droms further suggested these functionalities can be executed on the same host in one or more processors (**col 9, lines 28-33**). Therefore it would have been obvious to combine the functions from multiple tables into an enhanced ACL in the gateway (item 146 of Fig 1) for converting DNS names into corresponding IP and physical addresses (**MAC address**) according to data in the enhanced access control list. Droms disclosed developing the access control list from each of the operations of converting (**col 6, lines 13-67, col 7, lines 1-9, col 9, lines 9-27**), but fails to disclose converting at least one of user names into corresponding IP address. However, Green et al in the invention of "Apparatus and Method for Network Vulnerability Detection and Compliance Assessment" disclosed a method for converting user names into corresponding IP addresses (**determine the IP address from DNS, para 0065**).

Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention of made to include the method of converting user names into corresponding IP address as taught by Green et al in the system of Droms et al to covert user names and physical addresses into IP addresses. One is motivated as such

in order to determine an IP address with minimum latency to route an information packet based on user name and physical address.

Regarding claim 2, Droms et al disclosed storing the user names and corresponding IP addresses in a mapping state database that defines current relationships among user names (**col 7, lines 24-35**), DNS names, domain names (**col 12, lines 21-32**), and physical addresses (**col 11, lines 20-28, col 16, lines 1-19**).

Regarding claims 3, 11, Droms et al disclosed that each physical address comprises a MAC address (**col 10, lines 16-23, col 16, lines 1-19**).

Regarding claim 13, Droms et al disclosed mapping user names into physical addresses comprises: detecting login packets (**authentication, user ID and password**) being communicated over the network; determining a MAC address from the login packets (**col 2, lines 17-37, col 12, lines 50-67**);

Regarding claims 5-6,14, Droms et al disclosed converting DNS names into corresponding IP addresses according to data in the enhanced access control list comprises: detecting packets having an unknown source IP address (**col 9, lines 14-24**); generating a DNS name query using the source IP address (**col 9, lines 24-27**); receiving a DNS name associated with the IP address responsive to the query; and developing records in the access control list using the obtained IP address for the respective DNS name (**col 8, lines 30-62**) and occasionally generating new DNS name queries for the source IP address and thereafter repeating the operations of receiving and developing to update the access control list (**col 12, lines 21-33**).. (**col 12, lines 50-67**);

Regarding claims 7, 15, Droms et al disclosed occasionally receiving the DNS name associated with the IP address and thereafter repeating the operation of developing to update the access control list (**col 12, lines 66-67, col 13, lines 1-9**).

Regarding claims 8,17, Droms et al disclosed converting physical addresses into IP addresses according to data in the enhanced access control list comprises: monitoring DHCP packets communicated over the network (**col 13, lines 10-15**); obtaining an IP address assigned to a particular physical address from the monitored DHCP packets (**col 11, lines 20-24**); and developing records in the access control list using the obtained IP address assigned to a respective physical address (**col 11, lines 25-36**). Droms disclosed maintaining hosts/clients IP addresses corresponding to the domain names in ACL translated by the domain name server (**col 9, lines 1-27, col 12, lines 50-67, col 13, lines 1-24**) and a map of IP address to physical address (MAC) for physical connection in DHCP server (**col 10, lines 16-32, col 12, lines 21-32**) and Droms further suggested these functionalities can be executed on the same host in one or more processors (**col 9, lines 28-33**). Therefore it would have been obvious to combine the functions from multiple tables into an enhanced ACL in the gateway (item 146 of Fig 1) for converting DNS names into corresponding IP and physical addresses (**MAC address**) according to data in the enhanced access control list.

Regarding claims 9-10, Droms et al disclosed a method of controlling access of a user to a network including a plurality of hosts coupled together through a network switch (**item 102 of Fig 1**), the method comprising: storing in the network switch an enhanced access control list containing data related to at least one of user names (**user**

groups, col 7, lines 24-35), DNS names (URL), Windows domain names (domain names), and physical addresses (col 9, lines 14-17, col 11, lines 20-28, col 12, lines 28-31, lines 50-67, col 13, lines 1-24); and generating a dynamic access control list from the enhanced access control list, the dynamic access control list containing a plurality of IP addresses that restrict access of the user to the network (col 16, lines 21-32) and mapping user names to physical addresses; mapping physical addresses to IP addresses (col 10, lines 16-32); mapping unknown IP addresses to physical addresses; and mapping unknown IP addresses to DNS names (col 8, lines 30-62, col 11, lines 3-10); and applying rules set forth in the enhanced access control list relating to controlling access of a user to the addresses determined by the operations of mapping to generate the access control list (col 6, lines 13-67, col 7, lines 1-9, col 9, lines 9-27), Droms disclosed maintaining hosts/clients known and unknown IP addresses corresponding to the domain names in ACL translated by the domain name server (col 9, lines 1-27, col 12, lines 50-67, col 13, lines 1-24) and a map of known and unknown IP address to physical address (MAC) for physical connection in DHCP server (col 10, lines 16-32, col 11, lines 3-10, col 12, lines 21-32) and Droms further suggested these functionalities can be executed on the same host in one or more processors (col 9, lines 28-33). Therefore it would have been obvious to combine the functions from multiple tables into an enhanced ACL in the gateway (item 146 of Fig 1) for converting DNS names into corresponding IP and physical addresses (MAC address**) according to data in the enhanced access control list and generating the dynamic access control list, but Droms fails to disclose the feature of mapping user**

names to IP addresses. However, Green et al disclosed a method for converting user names into corresponding IP addresses (**determine the IP address from DNS, para 0065**).

Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention of made to include the method of converting user names into corresponding IP address as taught by Green et al in the system of Droms et al to covert user names and physical addresses into IP addresses. One is motivated as such in order to determine an IP address with minimum latency to route an information packet based on user name and physical address.

Regarding claims 16, Droms et al disclosed mapping unknown IP addresses to physical addresses comprises detecting packets having an unknown source IP address (**col 13, lines 1-18**).

Response to Arguments

6. Applicant's argument, see remarks, filed on 01/09/2009, with respect to rejection of claims 1-17 have been fully considered and are persuasive for claims 1-17. Therefore the rejection communicated via previous office action In view of Droms and Donaldson for claims 1-17 has been withdrawn. However a new ground(s) of rejection has been made in this office action in view of Droms and a newly found Green et al reference.

With respect to applicant's argument that Droms fail to teach enhanced or dynamic access control list as claimed in claims 1 and 9, however the examiner

respectfully disagrees as Droms disclosed generating or developing access control lists to support both IPv4 and enhanced IPv6 internet protocol and performing AAA functions with RADIUS and DHCP servers for automatic configuration of hosts, clients or users in the network (col 6, lines 13-67, col 7, lines 1-9, col 9, lines 9-27) and these dynamic configuration of access control lists is well known in the art and therefore the response to arguments over Droms is maintained in this office action.

With respect to applicant's argument for claims 1, 9 dependent claims, that Droms does not teach or suggest storing in the network switch enhanced access control list including data related to at least one of user names, DNS names, Windows domain names, and physical addresses. However, the examiner respectfully disagrees and points applicants to the reference, where Droms disclosed a method where gateway (item 145 of Fig 1) which stores and maintains the access control list checks the source IP address in the message sent by the host via the network switch (item 102 of Fig 1) and further disclosed a method for checking the message for user names (user identification) and URL (domain names) by the DNS to process the request from host (col 12, lines 50-67, col 13, lines 1-24, Figs 1-2).

With respect to applicant's argument for independent claims 1, 9 and dependent claims, that Droms does not teach or suggest a method of developing an access control list, however, the examiner respectfully disagrees and points applicants to reference, where Droms disclosed a method for maintaining the access list and further disclosed adding IP addresses to the list for controlling the access (col 13, lines 1-24) to process the requests from hosts.

With respect to applicant's argument for independent claims 1, 9 and dependent claims, that Droms does not teach or suggest converting user names into corresponding IP and physical addresses according to data in the enhanced access control list. However, the examiner respectfully disagrees and points applicants to reference, where Droms disclosed mapping (converting) physical address (MAC) and logical addresses (IP) for identifying the source and destination address of the request and response messages that is processed by the gateway (col 15, lines 60-67, col 16, lines 1-61). It is also well known in the art that such mapping of physical to logical address (or vice-versa) to convert physical to logical address in access lists to route the response messages during authentication and authorization process.

Allowable Subject Matter

7. a) Claims 18-25 are allowed over prior art.

The prior art fails to teach and render obvious the limitations for a network switching circuit as claimed in claims 18 and 22:

“provide the specific packets on a processor port, and further operable to receive packets on one of a plurality of ports including the processor port and to forward each received packet to a port corresponding to a destination address contained in the packet subject to access restrictions contained in a dynamic access control list; a memory circuit coupled to the forwarding circuit, the

memory circuit operable to store packets and operable to store an enhanced access control list and a dynamic access control list;"

Claims 4, 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach and render obvious the limitations of claims 4,12 for developing an access control list, wherein converting user names into corresponding IP and physical addresses according to data in the enhanced access control list comprises: detecting login packets being communicated over the network; determining a MAC address from the login packets; detecting server message block login packets being communicated over the network; determining an IP address from the server message block login packets; and developing records in the access control list using the obtained IP address for the respective user name.

However for claim 4, the rejection made under 35 U.S.C 101 in this office action for claims 1-8 must be overcome in order for the allowability of claim 4.

Conclusion

8. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

9 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/Venkatesh Haliyur/

Examiner, Art Unit 2419

/Daniel J. Ryman/

Supervisory Patent Examiner, Art Unit 2419